

# The Driver's Guide to METRO





# The Engine Driver

[On a METRO run]

## **Objective:**

To ensure a continuous flow of water to the METRO operation.

# The Engine Driver

[On a METRO run]

Things you must know-

- Running routes to METRO stations
- METRO SOPs
- Running routes to rail yards
- Rail Yard SOPs
- Access points along the Right-of-way (ROW)
- Location and type of connection(s)
- How to know when the system is full

## What a METRO FDC Looks Like



Each station and each tunnel section is provided with connections for the standpipe/sprinkler system. Your METRO maps will show you where they are located. Each METRO connection is in close proximity to a fire hydrant.

# What a METRO FDC Looks Like

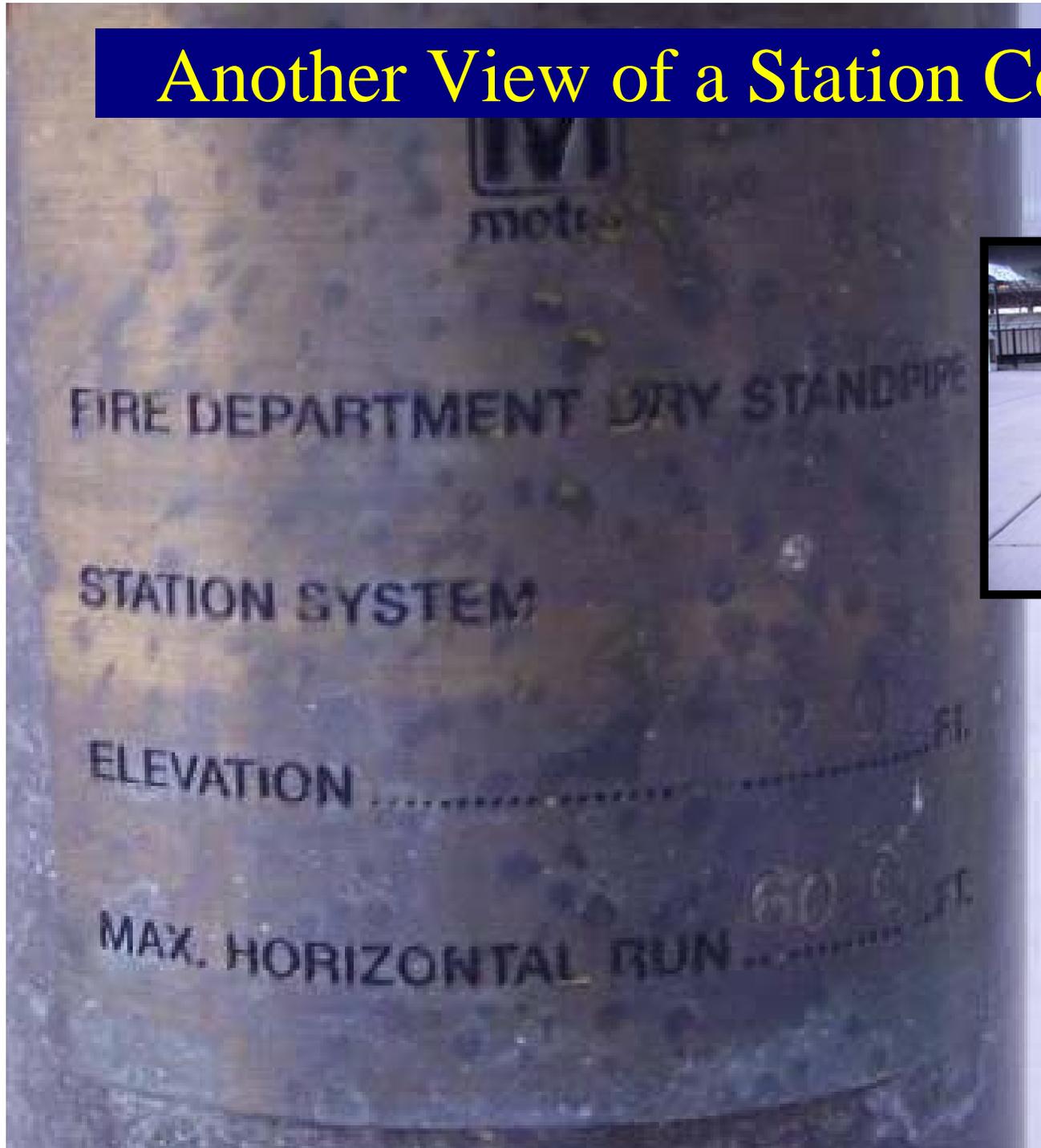


Close up view of placard on station wall

The placard on the connection will tell you three things...

1. Your location/the shaft or station identification number
2. The vertical drop of the system...and
3. The maximum horizontal run of the section of pipe you are using...cont...

## Another View of a Station Connection



The numbers are stamped into the metal plate and hard to read on a sunny day

## Another type of connection



*This connection is located at a fan shaft...it provides the following information*

1. Your location/the shaft or station identification number [*FE13 in this case*]
2. The vertical drop of the system...and
3. The maximum horizontal run of the section of pipe you are using...cont...

A closer look at FDC for FE13



FIRE DEPARTMENT DRY STANDPIPE

SHAFT IDENTIFICATION NO. FE13

VERTICAL DROP 105 FT.

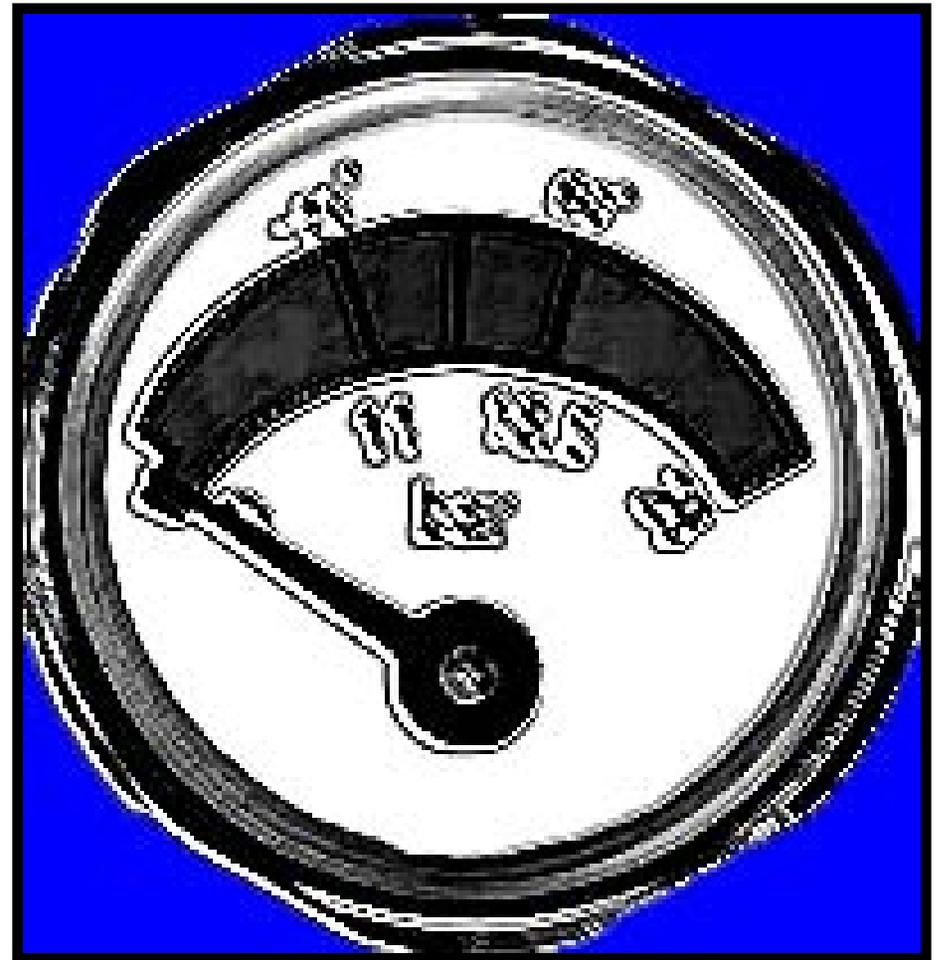
MAX. HORIZONTAL RUN 100 FT.

# Filling the System

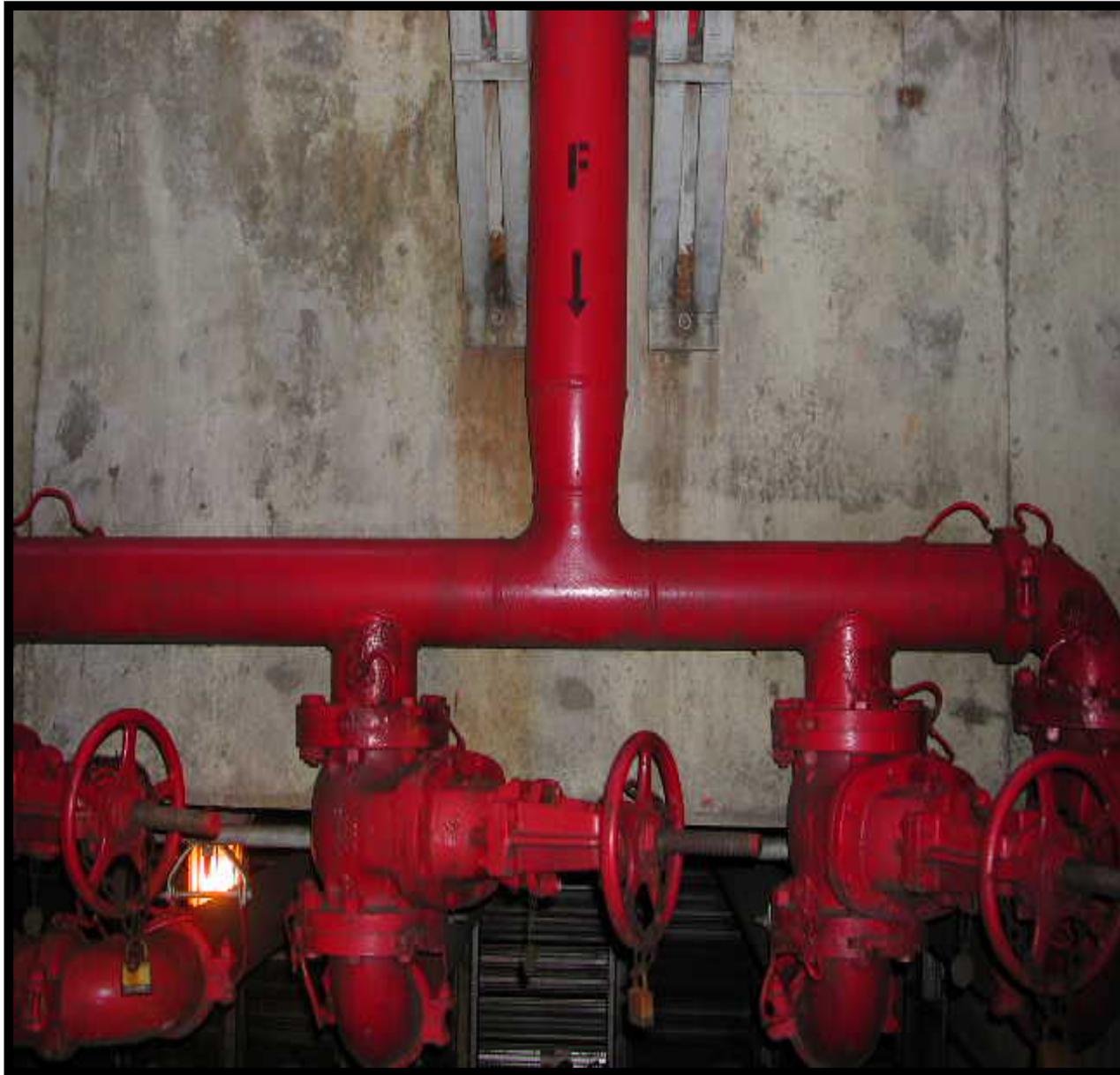
You must fill the system at hydrant pressure.

You can tell when the system is full by watching your gauges

**Per policy if the system does not fill within 10 minutes you are to notify the IC.**



# What the Connection Looks Like Underground



Notice the “T” at the bottom....if you send enough water at high enough pressure you can actually “blow” the connection up...

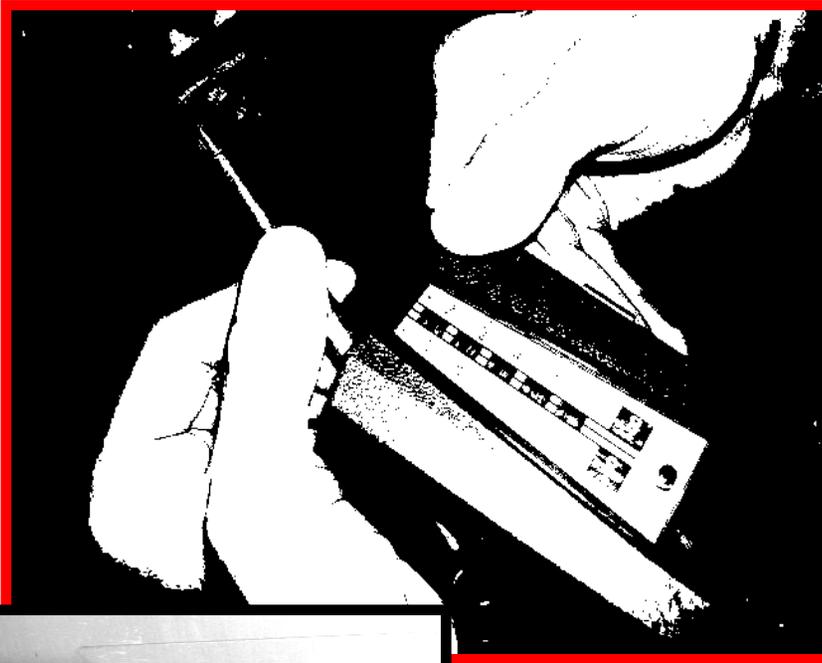
# The Truck Driver



# The Truck Driver

Incident Objectives:

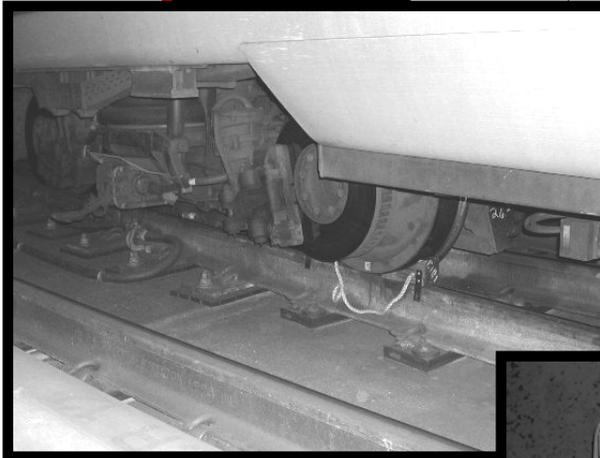
Participate in Safety Control Unit (SCU) duties and if third due manage either accountability or ventilation at the direction of the incident commander.



## SAFETY CONTROL UNIT

You are tasked with quite a few things like:

- Testing third rail,
- Chocking Trains,
- Discharging Filter Capacitors,
- Placing WSADs
- Monitoring your co-workers.



# SCU preparation



Check  
volt  
probes  
and hot  
sticks on  
known  
live  
sources....

# SCU



Before the call review the METRO policy, especially the position you are due in.

Once on scene, Stop! Take a deep breath and then begin work.

Ensure that the first due engine officer has contacted OCC.

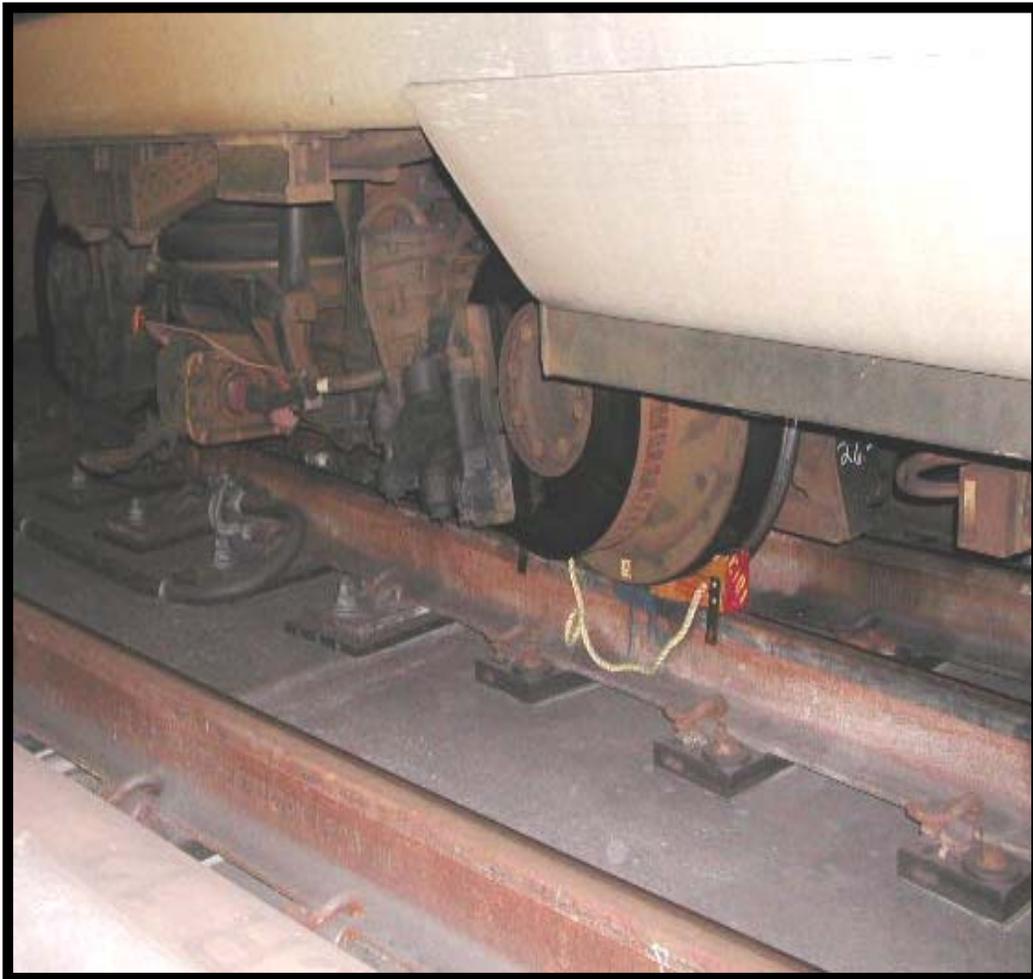
Begin by testing third rail locally.



# Testing Third Rail

- Check Volt-Probe at morning check-out.
- Check your volt-probe with a **KNOWN** electrical source before testing third rail. (Use an outlet on the ladder truck or plug in a light to a METRO wall plug then test the Volt-Probe.)
- Kneel in between the running rails with the Volt-Probe itself in your hand.
- Make contact with the running rail first.
- Then make contact with the third rail.
- Hold the Volt-Probe so that you can see the lights light up.(E.g. the front of the Volt-Probe should be facing you.)

# Chocking the train



To secure the train:

Check third rail locally.

Chock the train on the side opposite the third rail.

Place WASDs

# The WSAD



RUNNING RAIL  
(GROUND)

DO NOT ATTEMPT TO USE THIS DEVICE WITHOUT PROPER TRAINING.  
1) STAND THE HIGH VOLTAGE WARNING DEVICE ON EDGE WITH SUITCASE HANDLE FACING UP.  
2) ATTACH WHITE PADDLE TO RUNNING RAIL (GROUND). NOTE: GROUND PADDLE CONNECTED INDICATOR LIGHT SHOULD TURN ON.  
3) ATTACH RED PADDLE TO THIRD RAIL (HIGH VOLTAGE). NOTE: THIRD RAIL PADDLE CONNECTED INDICATOR LIGHT SHOULD TURN ON.  
4) LAY THE HIGH VOLTAGE WARNING DEVICE FLAT WITH STROBE LENS FACING UP.  
NOTE: BOTH PADDLE CONNECTIONS SHOULD TURN OFF.  
THE UNIT IS NOW OPERATIONAL.  
SEE OPERATING MANUAL FOR COMPLETE INSTRUCTIONS.  
MCMC  
MCDERMOTT  
HIGH VOLTAGE  
WARNING DEVICE  
U.S. Patent 4,812,111

THIRD RAIL  
(HIGH VOLTAGE)

THIRD RAIL  
(HIGH VOLTAGE)

**The WSAD is our only way to know if the third rail has been re-energized.**

**Its proper placement is paramount.**

**The WSAD should be tested daily to ensure proper function.**



- Use the test buttons before placing the unit.
- Note the proper status of the indicator lights.

The WSAD comes with instructions printed on the front of it. Review the directions daily.

THIRD RAIL  
PADDLE  
CONNECTED



RED  
PADDLE

SIREN  
TEST



STROBE  
LIGHT  
TEST



GROUND  
PADDLE  
CONNECTED



WHITE  
PADDLE

DO NOT ATTEMPT TO USE THIS DEVICE WITHOUT PROPER TRAINING.

- 1) STAND THE HIGH VOLTAGE WARNING DEVICE ON EDGE WITH SUITCASE HANDLE FACING UP.
- 2) ATTACH WHITE PADDLE TO RUNNING RAIL (GROUND).  
NOTE: GROUND PADDLE CONNECTED INDICATOR LIGHT SHOULD TURN ON.
- 3) ATTACH RED PADDLE TO THIRD RAIL (HIGH VOLTAGE)  
NOTE: THIRD RAIL PADDLE CONNECTED INDICATOR LIGHT SHOULD TURN ON.
- 4) LAY THE HIGH VOLTAGE WARNING DEVICE SUITCASE FLAT WITH STROBE LENS FACING UP.  
NOTE: BOTH PADDLE-CONNECTED INDICATOR LIGHTS SHOULD TURN OFF.

THE UNIT IS NOW ACTIVATED!

SEE OPERATING MANUAL FOR COMPLETE INSTRUCTIONS



McDERMOTT LIGHT & SIGNAL  
HIGH VOLTAGE WARNING DEVICE  
(800) 842-5/08

U.S. Patent No. 4,713,653



THIRD RAIL

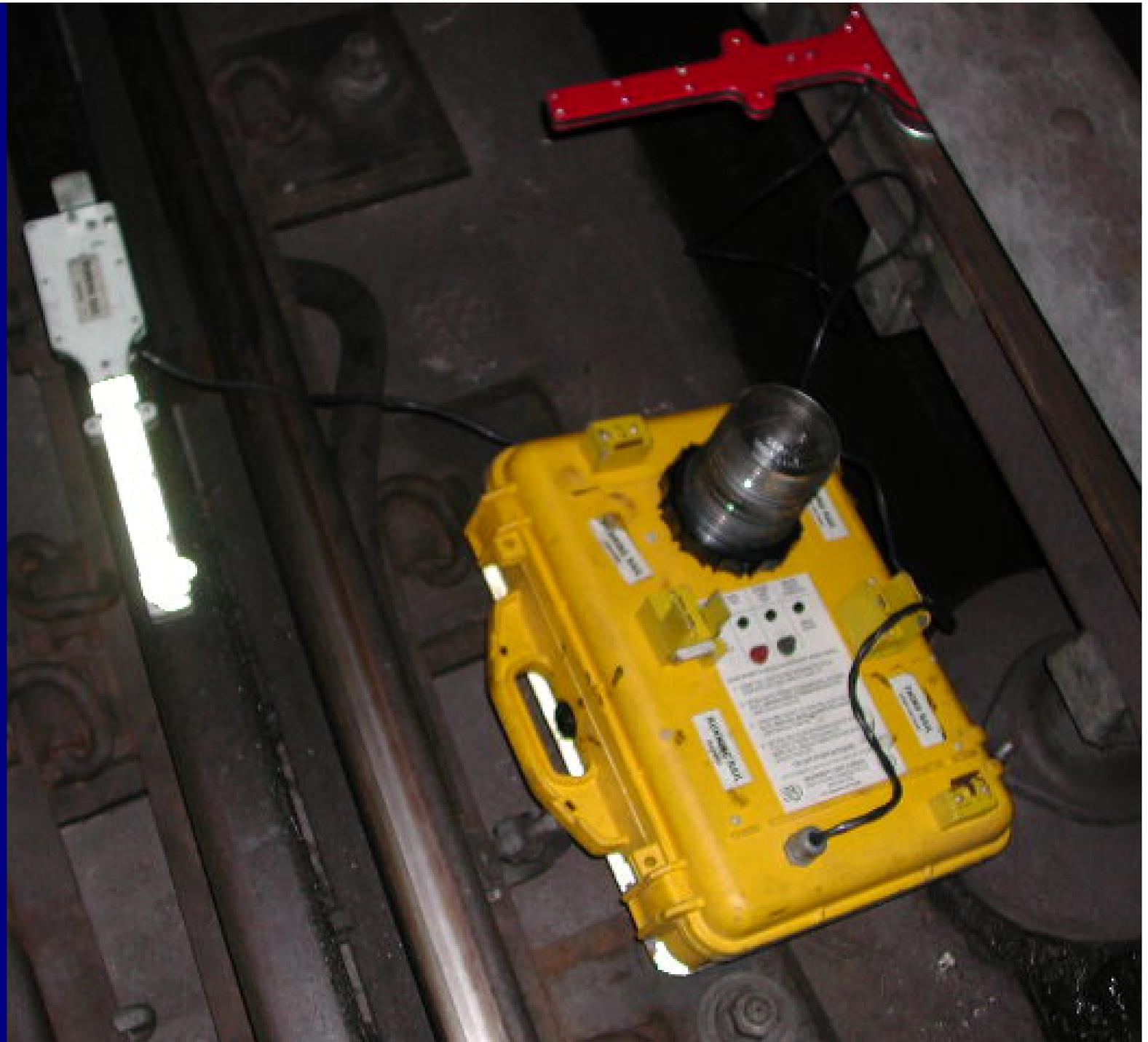
WSAD  
properly  
placed.

Remember:  
White  
paddle to  
running rail

Red paddle  
hits the  
third rail  
then...

The box  
lays down.

Avoid  
laying box  
in between  
running  
rails.

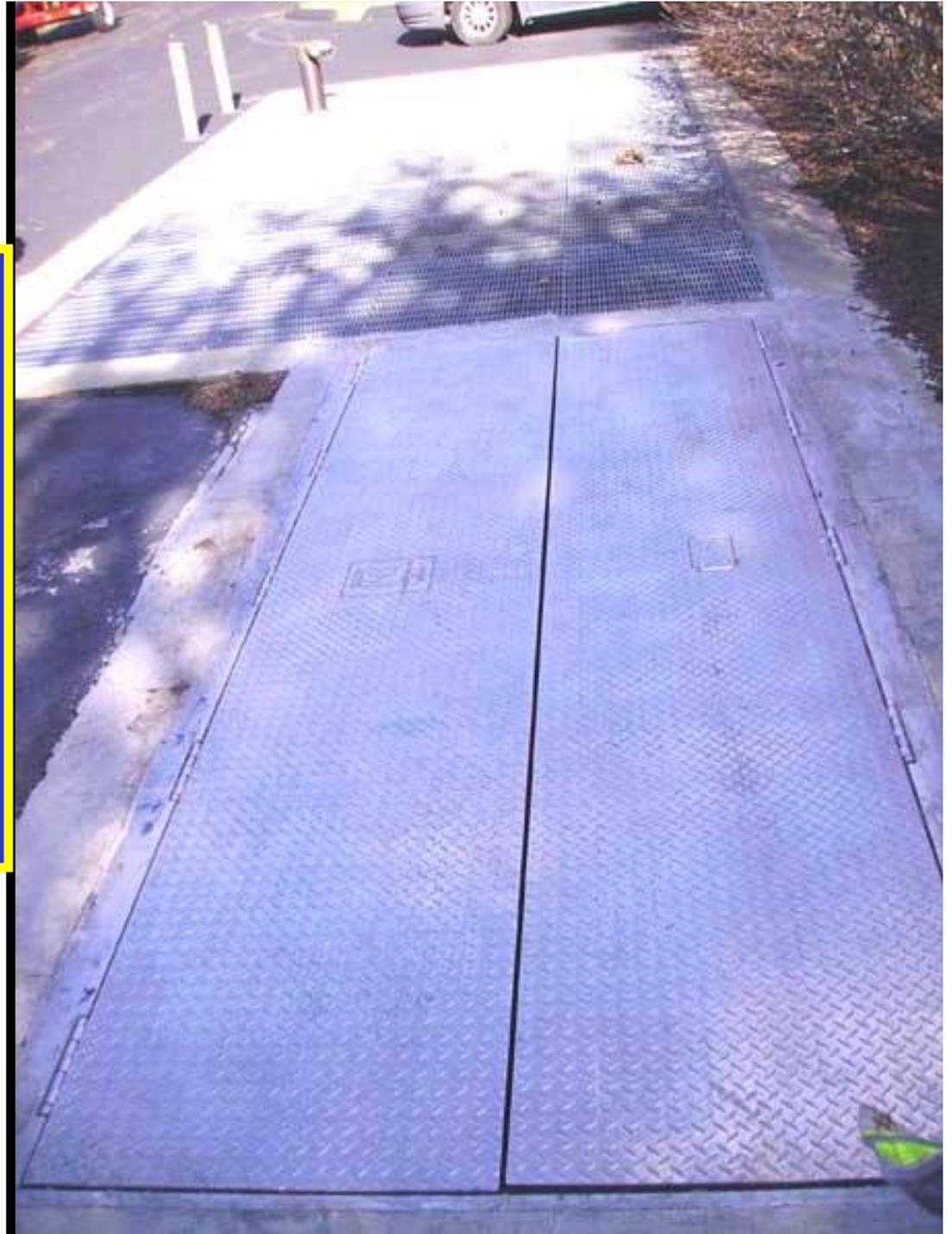


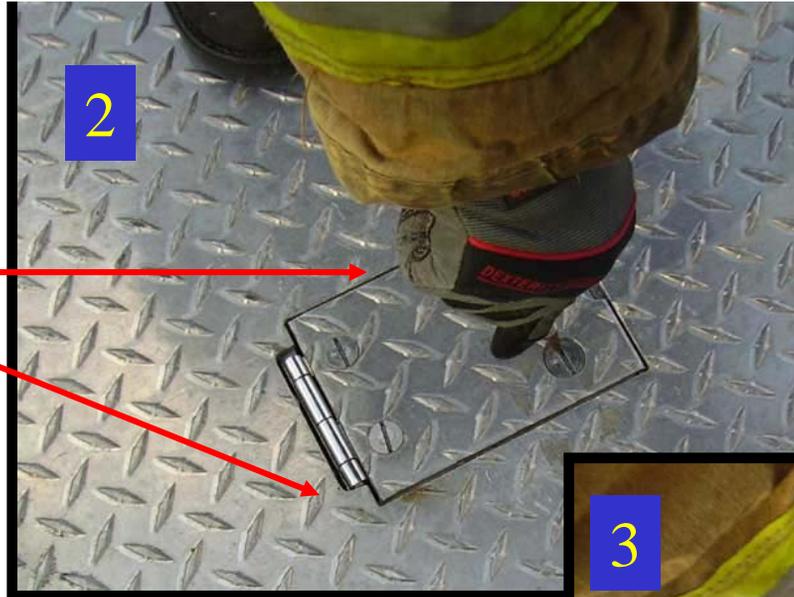
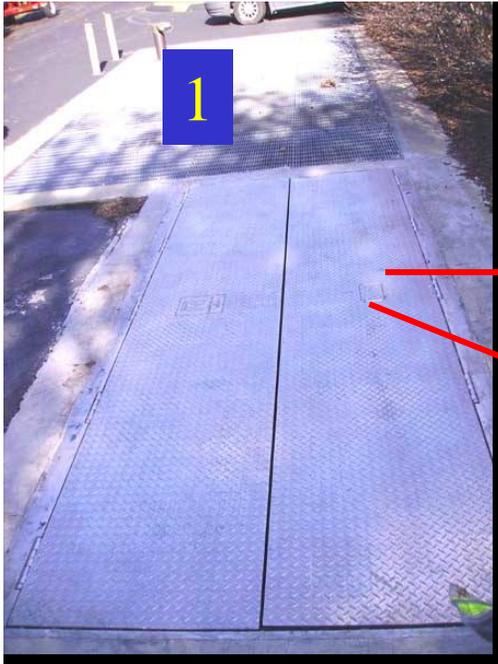
- **After the train is secured, the third rail tested and the WSAD placed you must assist with patient care, fire suppression etc...**
- **Also monitor all personnel for fatigue, mental lapses, and safety violations.**

**(A lot of work for three guys admittedly, ask for help as needed.)**

# Accessing Vent/Fans Shafts

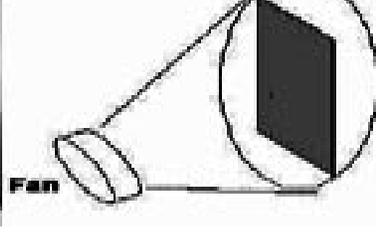
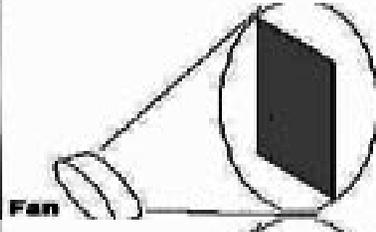
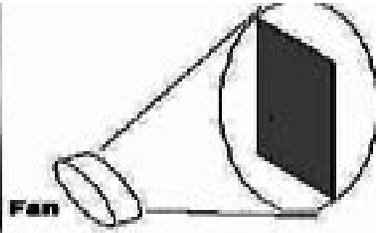
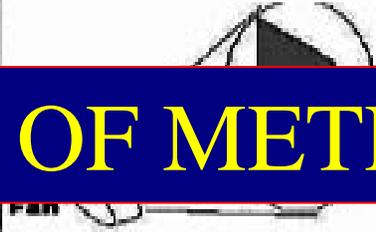
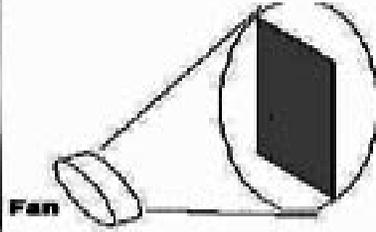
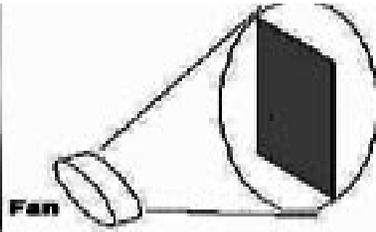
The access is at ground level. there will be hatchway with two doors... on one door you will find a flip up panel (you will need a flathead screwdriver to open the panel) under the panel is a padlock...the key for it is on your METRO key ring.





After you get panel unlocked and hasp flipped up pull on ring to open doors

# VENTILATION OF METRO TUNNELS



# The third due truck

The third due truck will be responsible for coordinating ventilation...

Your fans will not be enough to vent a tunnel section....you will need to use the METRO fans

If the METRO fans are not functional we will have great difficulty moving heat/air/other by products of combustion

# The third due truck

- There are three ways to activate METRO's fans
- Some activate themselves at a certain temperature
- There are controls at the fan itself
- OCC has remote control over the fan

# The third due truck

METRO automatically puts their fans in exhaust mode....

You have to determine where the smoke or other product is venting to and whether that activity should continue

You have to know that simply placing one fan on exhaust and the adjacent fan on intake may not create the draft you think it will.

# The third due truck

You have to be sure that you are not exhausting out of a portal, shaft that other are using for escape or evacuation...

# The fans



The fans on approach...



You might see the fan housing and then have to pass through a door to access the fan controls

The fans  
This is the view  
looking back  
towards the  
entry door notice  
the louvers in  
the background



The fan controls notice there are two modes you can place the fan in: exhaust or supply you can also shut the fans off at this point should that be required





This is an indicator panel near the fans that indicates the status of power to the fans.